



Caerus

SURFACE POST JOB REPORT

Puckett 35B-23-697 05-045-23369
S:26 T:6S R:97W Garfield CO

CallSheet #: 655
Proposal #: 13093



SURFACE Post Job Report

Attention: Mr. Steve Schmitz | (720) 880-6412 | sschmitz@caerusoilandgas.com
Caerus
1001 17th Street, Suite 1600 | Denver, CO 80202

Dear Mr. Schmitz,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,

Nick Stille

Technical Specialist - I | (307) 286-0815 | nick.stille@bjservices.com

Field Office 1716 East Allison Rd., Cheyenne WY, 82007
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1 Job Details & Summary

1.1 Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Inner	9.625	8.835	40	LTC	0	2519	0
Open Hole	Outer	n/a	14.75	n/a	n/a	100	2000	25
Open Hole	Outer	n/a	14.75	n/a	n/a	2000	2530	0
Casing	Outer	20	19.5	53	n/a	0	100	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Cement Pump	104	Kresge, Adam	677
Cement Chemical	401	Hamilton, Daniel	677
Silo	651		
Silo	650		
Light Duty Pickups	5	Johnson, Chad	677
Plug Container	150519		
Swage	150539		

1.3 Timing

Event	Date/Time
Call Out	3/21/2017 21:30
Depart Facility	3/21/2017 22:00
On Location	3/21/2017 23:30
Rig Up Iron	3/21/2017 23:50
Job Started	3/22/2017 06:00
Job Completed	3/22/2017 15:00
Rig Down Iron	3/22/2017 15:30
Depart Location	3/22/2017 17:00

1.4 General Job Information

Metrics	Value
Well Fluid Density	9 lb/gal
Well Fluid Type	WBM
Rig Circulation Vol	195 bbls
Rig Circulation Time	1 hours
Calculated Displacement	191 bbls
Actual Displacement	191 bbls
Total Spacer to Surface	0 bbls
Total CMT to Surface	1 bbls
Well Topped Out	Yes
Top Out Volume	8.6 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	16
Yield Point	14
10 sec. SGS	4
10 min. SGS	10
30 min. SGS	38
Filtrate	12.8
Flow Line Temp.	80

1.6 Job Details

Metrics	Value
Flare Prior to Job	No
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	9 lb/gal
Well Fluid Density Out of Well	9 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	94 °F
BHST	128 °F

1.8 Circulation

Lost Circulation Experienced	Losses into Spacer	Losses into Cement	Losses into Displacement
Yes	0	80	0

Circulation Details:

No returns after pressure test. Regained returns after switching to lead cement. 80 bbls into lead cement lost returns.

1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Top (ft)
1	1	Water	Flush	8.33			42.00		20.00	0
1	2	Sodium Silicate	Flush	10.00			21.00		20.00	0
1	3	Water	Flush	8.33			42.00		20.00	0
1	4	ALTCem S100-12	Lead	12.00	2.53	14.85		703.00	316.33	0
1	5	ALTCem S100-12	Tail	12.50	2.22	12.58		161.00	63.76	2000
1	6	Water	Displacement	8.33			42.00		10.00	2328
1	7	Mud	Displacement	8.33			42.00		160.00	218
1	8	Water	DisplacementFinal	8.33			42.00		17.00	0
1	9	ALTCem S100-12	Topout	12.50	2.22	12.58		250.00	99.00	0



1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	2	Flush	Sodium Silicate	ASF-10	Extender	21.00	gal/bbl
1	4	Lead	ALTCem S100-12	AC3-10	Cement	100.00	%
1	4	Lead	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	4	Lead	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	4	Lead	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	4	Lead	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	4	Lead	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	5	Tail	ALTCem S100-12	AC3-10	Cement	100.00	%
1	5	Tail	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	5	Tail	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	5	Tail	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	5	Tail	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	5	Tail	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk
1	9	Topout	ALTCem S100-12	AC3-10	Cement	100.00	%
1	9	Topout	ALTCem S100-12	ACL-10	Accelerator	2.00	lb/sk
1	9	Topout	ALTCem S100-12	ACL-20	Accelerator	5.00	%BWOB
1	9	Topout	ALTCem S100-12	ADF-11	Defoamer	0.30	%BWOB
1	9	Topout	ALTCem S100-12	ALC-10	LostCirculation	0.13	lb/sk
1	9	Topout	ALTCem S100-12	AXE-30	Extender	2.00	lb/sk

2 Job Logs

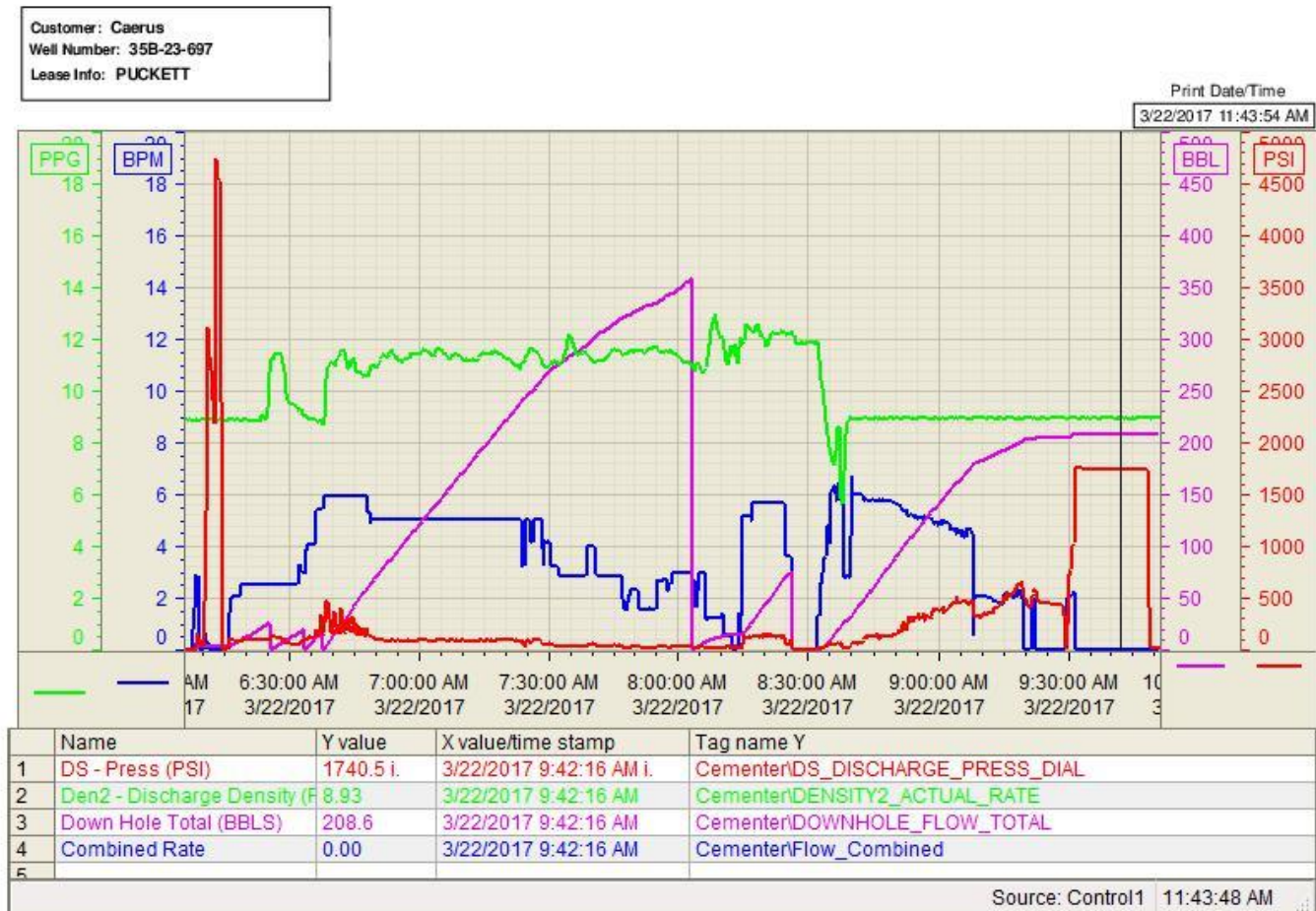
Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Callout	3/21/2017	21:30					Crew called out for job, requested on location for 04:30
2	Depart For Location	3/21/2017	22:00					Crew departed for location
3	Arrive On Location	3/21/2017	23:30					Crew arrived on location
4	Safety Meeting	3/21/2017	23:40					Pre rig up safety meeting
5	Rig Up Iron	3/21/2017	23:50					Crew spotted and rigged up all equipment and iron
6	Waiting	3/22/2017	02:00					Crew waiting on rig to finish running casing and circulate the well
7	Safety Meeting	3/22/2017	05:20					Pre job safety meeting
8	Fill Lines	3/22/2017	06:00	8.33	2	3	50	Fill lines with 3 bbls fresh water
9	Pressure Test Lines	3/22/2017	06:07					Pressure test lines to 3500 psi
10	Pump Spacer	3/22/2017	06:15	8.33	2	20	100	Pump 20 bbls water spacer
11	Pump Spacer	3/22/2017	06:23	10	3	20	100	Pump 20 bbls SMS spacer
12	Pump Spacer	3/22/2017	06:33	8.33	5	20	300	Pump 20 bbls water spacer
13	Pump Lead Cement	3/22/2017	06:37	12	5	317	200	Pump 317 bbls of lead cement @ 12 ppg, (703 sks, 2.53 Y, 14.85 gal/sk)
14	Pump Tail Cement	3/22/2017	08:03	12.5	5	64	150	Pump 64 bbls of tail cement @ 12.5 ppg, (161 sks, 2.22 Y, 12.58 gal/sk)
15	Shutdown	3/22/2017	08:26					Shutdown
16	Drop Top Plug	3/22/2017	08:31					Drop top plug
17	Pump Displacement	3/22/2017	08:32	8.33	6	50	100	Pump 50 bbls fresh water displacement
18	Pump Displacement	3/22/2017	08:52	8.33	6	100	250	Pump 50 bbls fresh water displacement
19	Pump Displacement	3/22/2017	09:01	8.33	6	150	400	Pump 50 bbls fresh water displacement
20	Slow Pump Rate	3/22/2017	09:08	8.33	2	180	300	Slow pump rate at 180 bbls away
21	Land Plug	3/22/2017	09:32	8.33	2	191	500	Land plug at 191 bbls away, final pressure was 500 psi took to 1500 psi
22	Test Casing	3/22/2017	09:33				1500	Hold 1500 psi for casing test, for 15 mins
23	Check Floats	3/22/2017	09:48					Check floats, floats holding, 0.5 bbls back.
24	Other	3/22/2017	10:00	8.34	2	10	400	Pump 10 bbls sugar water down parasite line

25	Waiting	3/22/2017	10:20					Wait for rig to nipple up BOP then top out the well
26	Pump Cement	3/22/2017	14:48	12.5	1	8.6	50	Pump top out cement. Pump 8.6 bbls of top out cement at 12.5 ppg. (22 sks, 2.22 Y, 12.58 gal/sk)
27	Shutdown	3/22/2017	14:50					Shutdown, watch cement for 10 mins, cement did not fall
28	Safety Meeting	3/22/2017	15:15					Pre rig down safety meeting
29	Rig Down Iron	3/22/2017	15:30					Crew rigged down all equipment and iron
30	Depart Location	3/22/2017	17:00					Crew departed location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	75 °F	50-80 °F
pH Level	6	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	0	0-1000
Total Hardness	250 mg/L	0-500 mg/L
Carbonates	50 mg/L	0-100 mg/L
Sulfates	<200 mg/L	0-1500 mg/L
Potassium	0 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams





Top Out

